

### **REMARKS**

Claims 5 and 6 have been cancelled. Claim 1 has been amended. Claims 1-4 and 7-21 are now pending in this application. Support for the amendments is found in the existing claims and the specification as discussed below. Accordingly, the amendments do not constitute the addition of new matter. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

#### **Allowable subject matter**

Applicants gratefully acknowledge the Examiner's indication of allowability for claims 10-21.

#### **Rejection under 35 U.S.C. § 102(b)**

Claims 1, 2, 4, 7, and 8 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Jinno, et al. (US 2002/0050470).

With this amendment, the limitations of claim 5 have been incorporated into claim 1. As claim 5 was not subject to this ground of rejection, Applicants respectfully submit that claim 1 as amended is not anticipated by Jinno, et al. Claims 2-4 and 7-9 depend from claim 1 and have all of the limitations of claim 1. Accordingly, claims 1-4 and 7-9 are not anticipated by Jinno, et al.

In view of Applicants' amendment, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

#### **Rejection under 35 U.S.C. § 103(a) (Jinno & Reynolds)**

Claims 3 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Jinno, et al. (US 6,780,314) in view of Reynolds, et al. (3,492,794).

Jinno, et al. disclose a column for chromatography which comprises a hollow capillary and a collected body packed in the hollow capillary. The columns are packed with long polymeric fibers (see paragraph 0033 of Jinno, et al). The column as claimed does not comprise elastic wires made of polymeric fibers as taught by Jinno, et al.

The column of Jinno, et al., having a packing consisting of long polymeric fibers, cannot be used in ATREF analysis. A capillary column for ATREF will unavoidably block the column

during the crystallization step. Thin and long filaments such as the long polymeric fibers of Jinno, et al. will form dense coils which will block the column during the precipitation step. Such a column is not suitable for ATREF.

The ATREF column as claimed by Applicants has the feature that the packing inside the column has a homogenous distribution and the free internal volume of the column can be correlated with elution during the crystallization step. The column packing is selected to be homogenous and to allow the free internal volume of the column to be equal to or higher than the eluting volume during the crystallization step. As a result, a polymer will leave the column before crystallization is completed. Accordingly, packing of the presently claimed invention provides highly efficient fractionation and improved baseline.

Reynolds, et al. is cited to correct the deficiencies of Jinno, et al. However, Reynolds, et al. differ from the claimed invention in teaching that the wires must be coated. However, Reynolds, et al. teach column packing having a regular ordered geometric structure made of fine wires, filament or fibers (col. 3, lines 25-27). Wires, filaments or fibers as disclosed by Reynolds, et al. are "adapted to be coated with a substance having different attractions to the different components of the mixture that is to be separated" (col. 3, lines 27-30). Jinno, et al. also teach that the long fibers are subject to surface treatment or to chemical modification to achieve efficient level of separation and extraction (see paragraph 0038 of Jinno, et al.). In contrast, Applicants do not teach coating of the elastic wires. Applicants teach that "column packing consists of elastic wires having a length per diameter ( $L/D$ ) of at least 3 and wherein said elastic wires are made of stainless steel, metal, carbon fibers or glass fibers". The elastic wires do not have a coating.

Accordingly, even the combination of Reynolds, et al. with Jinno, et al. does not lead to the claimed invention because both Jinno, et al. and Reynolds, et al. teach coating of the wires. Accordingly, one of ordinary skill in the art would coat the wires of the column packing, based upon Jinno, et al. and Reynolds, et al.

Moreover, neither Jinno, et al. nor Reynolds, et al. teach or suggest that the disclosed columns can be used in ATREF. Jinno, et al. only refer to the use of long wires in a capillary column which is applied as a separation column in liquid and/or gas chromatography. Jinno, et al. do not suggest the possible use of this type of long fibers in an ATREF column. In fact, the

capillary column of Jinno, et al would not be suitable for ATREF, as discussed above, because a capillary column comprising thin and long fibers as packing would unavoidably block the column during the crystallization step. Likewise, Reynolds, et al. do not teach the use of their disclosed column for ATREF.

Regarding claim 3, claim 3 depends from claim 1 and has all of the limitations thereof and is patentable over the cited references for the reasons given above for claim 1.

In view of Applicants' amendments and arguments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

**Rejection under 35 U.S.C. § 103(a) (Britto & Reynolds)**

The Examiner has rejected claim 9 as being unpatentable over Britto, et al. in view of Jinno, et al. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to combine the teachings of Jinno, et al. with the teaching of Britto, et al. because the column of Jinno, et al. is disclosed as being considerably more advantageous for liquid analysis. However, since claim 9 depends from claim 1, which is neither taught nor suggested by Britto, et al. and Jinno, et al, taken separately or together, the invention defined in claim 9 is also patentably distinguished from the references, alone or in combination. Applicants respectfully request the withdrawal of the rejection.

**No Disclaimers or Disavowals**

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

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**CONCLUSION**

In view of Applicants' amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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